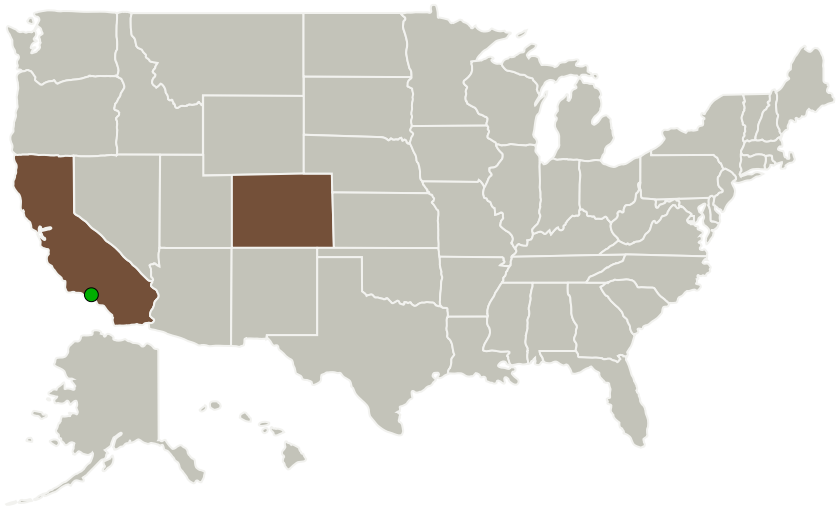
Calibration/Validation Technology for the CO2 Satellite, Phase II

Completed Technology Project (2011 - 2013)

Project Introduction

AOS has shown that it is feasible to use the combined NASA/SBIR resources from Phases I and II to: (i) Build a turn-key analyzer system that has the dual-band/differential architecture and is small, light and sensitive enough to be deployed in the smallest zone of the Global Hawk (GH); (ii) Demonstrate TRL 9 and flight readiness of the analyzer system for deployment on the GH and (iii) Validate the analyzer system for observations of CO2 DMF by double-blind comparison with the flask sampling technology of NOAA/GMD and by broadband comparison with an AOS analyzer system that have been validated on hundreds of airborne missions. The net result of Phase II will be a TRL 9 CO2 analyzer system that can be deployed on the GH as needed for NASA field studies and validation of CO2 satellites.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Atmospheric Observing Systems, Inc.	Lead Organization	Industry	Boulder, Colorado
Jet Propulsion Laboratory(JPL)	Supporting Organization	NASA Center	Pasadena, California

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Primary U.S. Work Locations	
California	Colorado

Project Transitions

June 2011: Project Start

June 2013: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138731)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Atmospheric Observing Systems, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

James Smith

Co-Investigator:

James D Smith

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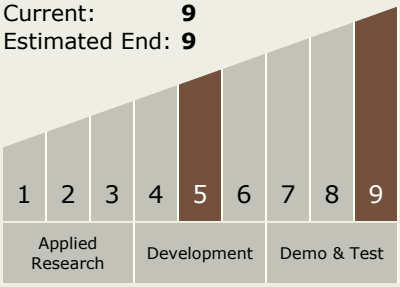
Technology Maturity (TRL)

Start: **5**
Current: **9**
Estimated End: **9**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.3 In-Situ Instruments and Sensors
    - TX08.3.4 Environment Sensors

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System